TED 7, Panel 2

27-Nov-2023

CMD observation on draft amendment 2 to IS 16192 Part-1

2.1 Comments received from CMD on draft amendment 2 (Attached at Annex- B) to IS 16192 Part 1

2. Amendment No. 2 was examined and it was observed that following major changes are being brought in the Standard through this Amendment:

Sl. No.	Page and clause reference	Change
1	Page 1, Cl. 3.2.2- Definition of Composite Construction Light alloy wheel	A Note is being added to clarify that wired spoke wheel rims are not covered under scope of the Standard

3. In addition to the above, following observations have also been made:
a) As per Fig.1, Spoke wheel rims are also covered in IS 16192-1. This fig. may also be required to be amended suitably to exclude wired spoke wheel rims from IS 16192-1. Amendment No. 2 may be reviewed from this aspect and revised.

b)Further, it is also felt that simultaneous amendment in IS 16192-3 may also be required to specify that wired spoke wheel rims are covered under scope of the Standard IS 16192-3 to avoid any confusion. Till that time, Amendment No 2 to IS 16192-1 may be held for publication.

4. **TED may be requested to look into the above observations and give clarifications/take necessary actions.**

CMD observations are only fro the following points:

1. **Figure 1 of IS 16192 Part-1 needs to be reviewed to make sure that the figures are only for alloy wheels.**

2. **Scope of IS 16192 Part-3 shall be specifically amended for 'wired' spoke wheel rims.**

Remark: once the above points are clarified then amendment-2 to IS 16192 Part-1 shall be published.

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2W_3W industry submission on Wire spoke wheel rim testing

27-Nov-2023

Background :

- Initially Wire-spoked wheels were built & used on M/C.
- Wire Spoke Wheel Rims were used in variety of M/C and till now they are highly considered for use in motorcycles.
- There are advantages of Wired-spoke wheel rim in respect to alloy type:
  1. Durable:
     a) Absorb the impact of hitting holes or obstacles to prevent the wheel from breaking while lessening the impact on the rest of the 2W.
     b) Transfers drive and braking force from the hub to the outer wheel and is proportional to the number of spokes crossing on each side.
  2. Wired-spokes are elastic and can absorb impact from rough terrains and bumpy roads.

Light Alloy Wheel rim testing:

- Later light alloy wheels came in existence.
- Due to ease of manufacturing and light weight and being more stylish, they gain wider acceptance.
- Since light alloy wheels gained preference there was a need to formulate certain standard for alloy wheels considering their brittleness and no flexibility that made them more venerable for breakage.
- It was then considered to define requirements of standard for light alloy wheel rims and then the international standards e.g. JWL 1986/5, ISO 8644 etc. are formulated for the same.

2W_3W Group Submission to TED 7 committee

- **India already have strength requirement specific for Wire Spoke Wheel rims.**
- **Wire spoke wheel rims do not fail unannounced. This is because these rims are basically are more flexible and less prone to breakages compared to alloy wheels.**
- **There are already wire spoke wheel rims fitted in field vehicles for so many years and no failures have been reported for the field vehicles.**
- **International standards for 2Ws also specifies the tests similar to IS 16192 (Part 3).**
- **CMD proposal is not to make dynamic test applicable for wired type spoke wheel rims.**
- **We support to maintain the current status of test requirements of IS 16192 (Part 3).**